

APPLICATION FOR UNITED STATES LETTERS PATENT

COVER FOR STORAGE CONTAINERS FOR LIQUIDS

BACKGROUND OF THE INVENTION

1. Field of the Invention

The invention relates to a cover for connecting sockets for receiving pipelines such as flow pipes and return pipes of oil burners of a furnace as well as a filling level indicator, a suction pump, an aerating and venting valve, or like operating devices. Such connecting sockets are arranged at the top of the storage container for liquids that are, in particular, combustible liquids such as heating oil.

2. Description of the Related Art

The manufacture of such covers that are preferably used in connection with outdoor heating oil storage tanks and are manufactured of sheet metal, is expensive.

SUMMARY OF THE INVENTION

It is an object of the present invention to further develop the cover for storage containers of the aforementioned kind with regard to an optimal protection against penetration of moisture as well as with regard to an inexpensive manufacture.

In accordance with the present invention, this is achieved in that the divided cover, manufactured of plastic material, comprises a stationary cover part, connected to the rim of the top of the storage container, and a pivotable cover part connected to the stationary cover part, wherein the pivotable cover part in a closed position rests with a closure rim against the rim of the top of the storage container and with a cover rim, that surrounds the end face opening of the pivotable cover part and extends in a plane that is slanted relative to the closure rim in a closing direction of the pivotable cover part. The cover rim covers the opening rim of the end face opening of the stationary cover part and surrounds in the open position the stationary cover part at a clearance and is supported thereon.

The invention is furthermore characterized in regard to the method by the steps of deep drawing a cover body from a plastic sheet material, subsequently separating the deep drawing edge from the cover body by a cut parallel to the plane of the sheet material, as well as separating the cover body into a first cover part that is to be fixedly connected to the rim of the top of the storage container and a second cover part that is to be pivotably connected to the first cover part, cutting out a segment from the cover body by means of two additional cuts, wherein the first cut is carried out perpendicularly, or approximately perpendicularly, to the lower edge of the cover body at the inner side of the drainage groove and the second cut, beginning at the lower edge of the cover body, extends at a slant to the first cut through the cover body.

BRIEF DESCRIPTION OF THE DRAWING

In the drawing:

Fig. 1 shows a perspective illustration of a storage container for heating oil with closed cover;

Fig. 2 shows in a perspective illustration the storage container of Fig. 1 for heating oil with the cover in the open position;

Fig. 3 shows in a side view the upper part of the container part with closed cover;

Fig. 4 shows in a side view the upper part of the container with the cover in the open position;

Fig. 5 shows a longitudinal section of the upper part of the container with the cover in the closed position; and

Fig. 6 shows in a side view the cover body made by deep drawing from a plastic sheet material illustrating the course of the cut for separating the cover body into two cover parts.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The parallelepipedal storage container 1, made of sheet metal, provided for liquids, in particular, combustible liquids like heating oil, used oil, lubricant oil, and diesel fuel, has a bottom 2, four sidewalls 3-6 connected by rounded corner areas 7 to one another, a top 8 with a connecting socket 9 for the feed conduit 10 and a connecting socket 11 for the return conduit 12 of the oil burner of a furnace, a connecting socket 13 for inserting a filling level indicator as well as a connecting socket 14 for an aerating and venting valve, and a cover 15 for the connecting sockets 9, 11, 13, 14, and the various operating devices.

The divided cover 15 made of plastic material is comprised of a stationary cover part 17 mounted on the rim 16 of the top 8 of the storage container 1 and a cover part 18 connected to the cover part 17 so as to be pivotable relative to the cover part 17. In the closed position 18a, the pivotable cover part 18 rests with a closure rim 19 against the rim 16 of the top 8 of the storage container and covers with its cover rim 20, that surrounds an end face opening 21 of the cover part 18 and extends in a plane 22-22 positioned at a slant relative to the closure rim 19, the opening rim 23 of the end face opening 24 of the stationary cover part 17.

In the open position 18b, the pivotable cover part 18 covers the stationery cover part 17 at a clearance and is supported with the end face 25 on a projection 26 of the stationary cover part 17. A drainage groove 27 is formed in the opening rim 23 of the end face opening 24 of the stationary cover part 17; by means of the groove 27, rainwater or melted snow that has entered the gap 28 between pivotable and stationary cover parts 17, 18 can drain to the exterior.

The stationary and the pivotable cover parts 17, 18 of the cover 15 have a lower cover rim 29, 30, respectively. The cover rims 29, 30 surround the rim 16 of the top 8 of the storage container 1. The pivotable cover 18 has in the area of the lower cover rim 30 a formed portion 31 that, in the closed position 18a of the pivotable cover part, forms between the lower cover rim 30 and the rim 16 of the top 8 of the storage container 1 a through opening 32 for the feed and return conduits 10, 12 of the oil burner of a furnace that are connected to the connecting sockets 10, 11 of the storage container 1.

The pivotable cover 18 has a recessed portion 33 for receiving a handle 34 for opening and closing the cover 15. The handle 34 is made of a pipe section 35.

In place of the handle in the form of a pipe section, on the pivotable cover part a lock for locking the cover can be provided. The lock can be configured as a handle for opening and closing the cover.

For manufacturing the cover, the cover body 36 illustrated in Fig. 6 is deep drawn of plastic sheet material 37. By means of a cut 39-39 parallel to the plane 40-40 of the sheet material 37, first the deep drawing edge 38 is separated from the cover body 36. Subsequently, the cover body 36 is divided into a first cover part 17 that is to be fixedly attached to the rim 16 of the top 8 of the storage container 1 and a second cover part 18 that is to be pivotably connected to the first cover part 17. Separating the cover body 36 into the two cover parts 17, 18 is realized by cutting out a segment 41 of the cover body with two additional cuts 42-42, 43-43, wherein the first cut 42-42 extends perpendicularly, or substantially perpendicularly, to the lower edge 44 of the cover body 36 at the inner side 45 of the drainage groove 27 and the second cut 43-43 extends, beginning at the lower edge 44 of the cover body 36, at a slant to the first cut 42-42 through the cover body 36.

While specific embodiments of the invention have been shown and described in detail to illustrate the inventive principles, it will be understood that the invention may be embodied otherwise without departing from such principles.